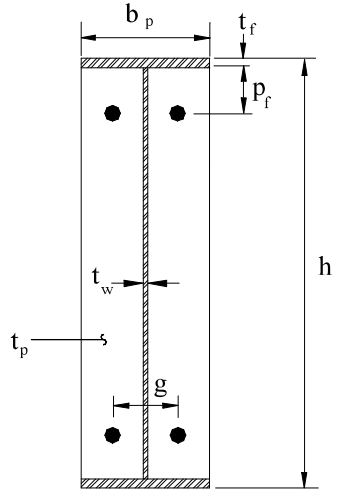
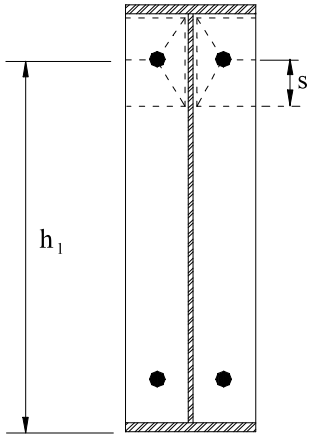
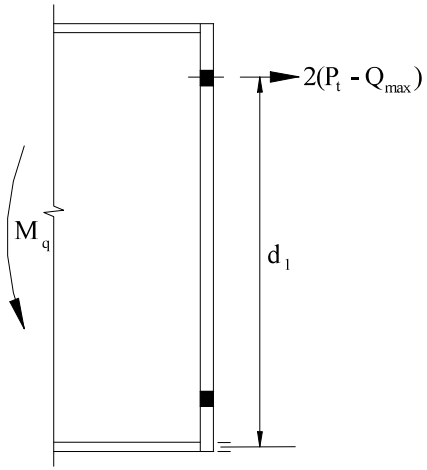
*Table 3-2 Summary of Two-Bolt Flush Unstiffened Moment End-Plate Analysis*

| Geometry | Yield-Line Mechanism | Bolt Force Model |
|---|---|---|
|   |   |   |

| | |
|---|---|
| End-Plate Yield | $\phi M_n = \phi_b M_{pl} = \phi_b F_{py} t_p^2 Y$<br>$Y = \frac{b_p}{2}\left[h_1\left(\frac{1}{p_f}+\frac{1}{s}\right)\right]+\frac{2}{g}\left[h_1(p_f+s)\right]$ Note: Use $p_f = s$, if $p_f > s$<br>$s = \frac{1}{2}\sqrt{b_p g}$ $\phi_b$ = 0.90 |
| Bolt Rupture w/Prying Action | $\phi M_n = \phi M_q = \max\begin{vmatrix}\phi[2(P_t - Q_{max})d_1] \\ \phi[2(T_b)d_1]\end{vmatrix}$ $\phi$ = 0.75 |
| Bolt Rupture No Prying Action | $\phi M_n = \phi M_{np} = \phi[2(P_t)d_1]$ $\phi$ = 0.75 |